

AMERICAN BEE JOURNAL

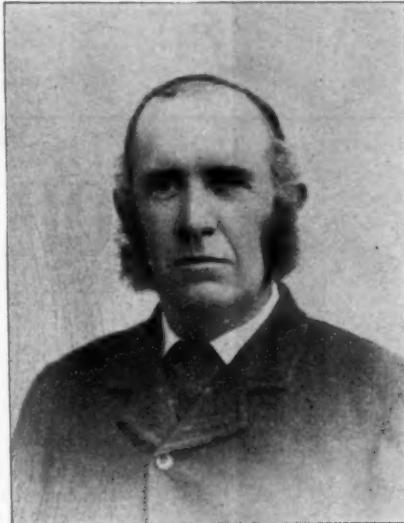


GEORGE W. YORK,
Editor.

CHICAGO, ILL., DECEMBER 20, 1900.

FORTIETH YEAR.
No. 51.

WEEKLY



W.M. McEVY,
Foul Brood Inspector of Ontario, Canada.

THE AMERICAN BEE JOURNAL.

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AMERICAN

ESTABLISHED IN 1861

BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

40th YEAR

CHICAGO, ILL., DECEMBER 20, 1900.

No. 51

Editorial.

The Chicago Convention Report has been unavoidably delayed somewhere, so that we are unable to continue it this week. We trust that such break will not happen again; but perhaps in view of the excellent matter in its place this week no one will complain on account of its omission for one issue. We hope it will not occur again, as we desire to complete it as soon as possible, as we have other interesting and helpful matter waiting its turn.

Shipping Comb Honey.—There is no one who knows better than the dealer in honey how it should be prepared for shipment. He is the man that is at the other end of the line from the producer or shipper, and is the only one who can report as to the condition of the honey after having traveled on the cars from starting-point to destination. He ought to be able to give some good advice about shipping honey, especially as he receives many shipments from almost as many different shippers, thus becoming familiar with the various methods of preparing it before starting it off to market.

Well, we have been doing something in the line of handling honey for several years, and during that time we have been able to collect some very valuable experience. But the trouble we find is, to get some bee-keepers to learn to take advice that is wholly for their own good. For instance, how often we have gone into the details, in these columns about preparing comb honey for shipment, and yet scarcely a season passes but what we have a repetition of an experience with broken-down comb honey that is anything but agreeable to us, and far from profitable to the producer.

Quite recently we received a shipment of about 50 cases of amber comb honey from an old bee-keeper, some 500 miles from Chicago. It arrived here in such a smash-up condition that our honey-man had to spend two full days in going thru the lot, cleaning it up, and putting all the broken-down sections of honey into cases by themselves. When he finish the miserable, sticky job, there were just 18 cases of 20 sections each of the wholly broken down comb honey.

And there needn't have been any broken-down comb if the shipper had prepared it properly before loading it on the cars.

Let us tell how it was packt: The 20-section cases were put into heavy boxes holding six cases each, but there was practically no

extra space to pack in straw. In some of the boxes the cases fitted so tight that it was difficult to get them out without first taking the box to pieces. Of course this was all wrong. There should have been a space of three or four inches all around the six cases (except on top) in which to put straw to act as a cushion. We also think it well, if using a large box instead of a crate (tho the crate is preferable), to leave one side rather open, using slats there instead of making it solid. Then the freight-handlers can see that it is comb honey, and will be more careful.

Of course, on top of each box or crate should be plainly marked—"COMB HONEY—HANDLE WITH CARE."

Another thing: The sections in the above lot of honey were crowded so tight into the shipping-cases that we actually had to pry the rear side of each case off before being able to take out a section. This is all wrong. The cases should have at least three-fourths inch space at the back, for a one-fourth inch thick board to stand on edge next to the sections of honey, and then newspaper wadded up and crowded in between the thin board and the back of the case. This serves as a sort of cushion, and will prevent many a comb from being broken down.

The boxes in this particular shipment had handles on them for the freight men to carry them by. That part was all right, but nearly everything else was wrong.

We have never received a shipment of comb honey in bad condition when it was properly packt before shipping. It is absolutely useless to expect to be able to ship comb honey safely when not prepared as it should be. To do otherwise is simply to be almost certain of loss. And the miserable, leaky, dauby mess that the receiver has to clean up is anything but pleasant, especially when he knows that it would have been wholly unnecessary had the honey been put up right before putting it on the cars.

We hope this story will serve as a warning to all who read it, to pack their comb honey as it should be when shipping to a distant market.

Bees and Fruit Again.—A certain judge in Adams Co., Ill., sent the following letter to Mr. J. Q. Smith, president of the Illinois State Bee-Keepers' Association, who, upon receiving it, referred it to us for reply and publishing, if we so desired to use it in these columns:

J. Q. SMITH—

Dear Sir:—A client of mine seeks damages because his neighbor's bees, from about 400 hives, clustered about his ripe grapes and peaches, and spoiled the crops of his vineyard and peach orchard. The bloom and flowers

were not as thick in woods and bottoms as usual this year.

Do bees usually do such damages to ripe grapes and peaches, seeking sweets, whether bloom is plentiful or not? The habits and customs of bees would answer this, and you may be able to suggest an answer.

Would bees do such damage usually, so the owner would ordinarily be supposed to have notice of such propensity?

To put the question fairly as to the habits and customs of bees, would solve the question in part. What books or papers treat of that point?

Upon receiving the above, we immediately requested General Manager Secor, of the National Bee-Keepers' Association, to mail the judge all the literature he had bearing on the subject. We have no doubt nothing further will be heard from the threatened prosecution. A conscientious attorney, after informing himself on the matter, would do all he could to prevent litigation of the kind indicated, for the intending plaintiff could well afford to pay a fat fee for being kept out of court, rather than certainly to end with a lost suit, and then to have all the costs to settle, besides his attorney's fee.

It would be well for our readers to bear in mind that all members of the National Bee-Keepers' Association have free access to any aid that it is able to give. If you are not a member, you can't do a better thing than to send your annual dues (\$1.00) to General Manager Eugene Secor, Forest City, Iowa, and thus put yourself in line with such help as you might require some day; and if not for yourself, you will be aiding your fellow bee-keepers in maintaining their rights against any unjust aggressions.

If more convenient for you, send the dollar to us, and we will see that Mr. Secor gets it. Then he will mail you a membership receipt.

Growing Clover.—Three prize articles on this subject appear in Gleanings in Bee-Culture, alike getting the lion's share of attention, red clover seeming to come in only incidentally. The writers are from different States—Wm. Robinson from Wisconsin, Wm. W. Case from New Jersey, and Harry L. Smith from Maine. The first article is of such importance that it is given elsewhere entire. What is true for Wisconsin is probably true for a large area of territory visited by this journal.

According to Mr. Case, it is easier to get a crop of alsike than of red, and it does not kill out so easily in winter. An objection is that alsike gives no second crop unless cut before thru blossoming, which spoils the honey crop. Mr. Case says:

"At the usual time of sowing clover in the spring on wheat and rye, mix red and alsike clover seed in the proportion of two pounds of red to one of alsike, and apply with tim-

othy, two pounds, at rate of not less than six quarts to the acre, and as much more as experience with your own peculiar soils shows will make a heavy stand. Should the first trial prove a failure, if necessary, furnish the farmers seed at half cost for second trial, and eventually you will get an alsike convert who would not do without it even if the seed cost \$30 per bushel. In the following hay crop, without interfering with the red crop in the least, it will, on the average, add 40 percent to the yield of hay, while the second crop of red will follow as tho no alsike had been grown. I have frequently seen it grow to a height of 20 to 24 inches the first season after removal of the wheat or rye.

"Fully three-fourths of the clover sown throughout this section of country contains its proper share of alsike; and as practically all the red clover froze to death last winter, and scarcely none of the alsike, next spring will see a far higher percent of alsike sown than in the past."

"The common practice in this section," says Mr. Smith, "has been to use about one-third red clover in seeding to grass; but experiments upon our farm have proved to us that we get more hay, and a much greater feeding value, by using more clover; about one-third red and one-third alsike clovers, the rest timothy and red top."

"The first year we get two crops of clover in which but little else will show; but during the following winter, fully half of the clover plants die, and the timothy and red-top take possession and feed upon the decaying roots, giving us a good crop of hay for two or three years. On our heavy clay soils we sow enough alsike to take the place of the red clover, as the latter will rarely make a stand. On moist fertile soil we can produce alsike three feet tall, and it will stool out so thick that it will form a perfect tangle; and how the bees revel in it! It seems as tho all the bees in the neighborhood were there. If it is cut when it first begins to bloom we may expect a second crop, but not otherwise, for alsike is a biennial; and if it is not cut before it comes into full bloom the most of the plants will die. If the summer is moist, red clover will produce a second crop, even if the first is not cut until the heads begin to turn brown. By seeding with both alsike and red clovers, and not cutting the first crop until it is in the height of bloom, we get a larger first crop; then the red clover will take possession and give us as large a second crop as tho it had been used alone in seeding. Clover likes a mellow soil, so we plan to have it follow some crop which leaves the ground light and friable."

A. I. Root adds in a foot-note: "Clover grown as we grow it, solely for improving the soil, is all right for honey, for we seldom plow it under until it is in full bloom, and some of the heads begin to turn brown. The largest crop of buckwheat we ever grew was where we turned under mammoth clover so late it was already full of seed. A neighbor told us the clover seed on the land was worth more than we could get for our buckwheat; but he was mistaken; and from this experiment I am inclined to think that clover is worth more to plow under when it contains some seed nearly or quite mature than at any other period."

Honey as a Daily Food.—Dr. C. C. Miller, in the National Stockman and Farmer of recent date, had this to say about the daily use of honey in the families of farmers:

Some farmers are in the habit of selling off all the best of anything raised, letting the family worry along with the leavings. It is pleasant to believe that in many cases honey forms an exception; that the farmer with two or three colonies of bees does not think of selling any of the honey, but leaves it all in the hands of the good wife, to do with when and how she will. Very wise indeed is such a farmer. Indeed, if he is wise enough, he will have honey on the table daily, even tho he should be obliged to buy it.

It is for the health to use honey. Many a poor mortal is to-day living a life of lingering torture or cruel self-denial, to whom the doctors have forbidden the use of all sugar and all foods abounding in starch. And the trouble came about from over-indulgence in

sugar. This nation has a wonderfully sweet tooth. Do you know that the average man, woman and child of the American nation consumes more than a pound of sugar every week of life? Some more than that, some less; more than a pound a week is the average. Before the sugar can be worked into flesh and blood, it must be changed from cane-sugar to grape-sugar. When too much of this work is thrown upon the stomach, there comes trouble—sour stomach, headache, and all the varied ills that come from bad digestion. The stomach turns over the job to the kidneys, and when the kidneys have more than they can do, having no one else to turn to for help, they break down with disease.

The use of honey satisfies this craving for sweet without the dangers that attend the use of sugar. The sugar in honey is already grape-sugar, all ready for assimilation. Give a child the choice between sugar and honey, and see which it will take. For too many children bread and honey is a treat, a luxury, instead of being an article of daily food. The old man or woman of 80, as well the child, finds the daily use of honey both pleasant and healthful.

The average family of five persons would be considered as using a good deal of honey to use 50 pounds in a year. Many do not use 10. But the average of sugar for such a family is about 300 pounds a year. If half of that, or even 100 pounds, were replaced by honey, it would be for the betterment of the health of the family.

The foregoing advice will apply to bee-keepers as well. Why shouldn't they use more of their own honey and buy less sugar? We have honey on our table three times a day, and the meal would seem hardly complete without it.

A good way to use extracted honey is to put a good-sized tablespoonful in a little sauce-dish for each one at the table. This will usually all be eaten. It is a much better way than to pass a dishful of it and let each one take what he wants and put it on his plate, to run all over it and daub the other things on the plate with its sticky sweetness. Try the side-dish plan, putting only enough into the dish so that it will be used at that particular meal.

Bee-keepers should set a good example to the world in the line of eating honey—"take their own medicine," or advice, as it were.

Weekly Budget

EDITOR W. Z. HUTCHINSON, in the last issue of his Bee-Keepers' Review, has these two very complimentary paragraphs:

The American Bee Journal receives a very kind but well-deserved notice from Gleanings. Among other things, Mr. Root fears that Bro. York does not get money enough for his journal when he sells 52 numbers for only \$1.00. This is what I have often thought; and only a first-class business-man, like Bro. York, would ever have kept the American Bee Journal afloat at that price, and made it what it is.

The Chicago convention report of the National Association meeting held last August in that city, as now being published in the American Bee Journal, is the best, most accurate, and fullest report ever published of any convention held by this body. It shows that it pays to have an efficient stenographer.

We can not conceive of anything that we have done to merit such kind words as have recently appeared in some of the bee-papers, notably Gleanings and the Review. We certainly appreciate them very much, and only hope that there never may anything occur

that will cause our good friends to regret having written the commendatory words.

We have been devoutly thankful for the kindly feelings that have existed for so many years between the editors of the various leading bee-papers. It was not always so. In other days, long ago, there was more or less of strife among the bee-brethren, not only touching those who were guiding and guarding the helms of the bee-papers, but among the rank and file of bee-keepers themselves.

Let us all rejoice in this better day that has dawned, and trust that the present era of good-will and good-nature may be as lasting as it is desirable and pleasant.

MR. WM. McEVoy is perhaps the best known bee-keeper in Canada to-day. His excellent report for 1900 as foul-brood inspector for the Province of Ontario appears on another page. Mr. McEvoy has made a success of handling that dread disease, and seems to have done so in a manner that all can approve. This is saying a good deal, when we remember that he has all kinds of people to deal with. We have met Mr. McEvoy, and also his good wife, and it would be rather difficult to say which is the better "man" of the two. However, we might say of them as did the Irishman when he wished to compare a couple of men, and do it gallantly. He said: "One is as good as the other, if not a little better!"

MR. WM. F. WARE, of Cumberland Co., N. J., gives his estimate of the American Bee Journal as follows:

"If you can tell me how any one keeping only a few bees, and can get along without taking the American Bee Journal, or some other paper just as good, and will make me believe it, I will send you at once another dollar for another year's subscription. You can't do it, you know."

"I hope to have a good season next year with my 20 colonies of bees."

EDITORS ROOT AND HUTCHINSON have been enjoying the attendance upon several bee-keepers' conventions in the East, particularly the recent Ontario convention, of which Mr. Wm. McEvoy, the hustling and efficient foul brood inspector for that Province, writes us as follows:

"We had the best convention ever held in the Province of Ontario. Mr. Holmes read the best paper on queens ever written, and of immense value. Prof. Fletcher, of Ottawa, prepared himself, and with charts and a lecture he astonished every one. Mr. J. B. Hall moved to have it published in pamphlet form for the benefit of both bee-keepers and fruit-growers. It was promptly carried. Our conventions are getting better every year. Woodstock is the next place of meeting."

It is too bad that we are not able at this season of the year to get away to meet the bee-keepers in conventions, but from Dec. 1st to Feb. 1st, we are usually kept very busy in the office, and feel that we simply must be here, not allowing anything but severe sickness or death to keep us away for even a day.

But we are glad that our brother editors can attend and enjoy the conventions. Besides, any one of them is more helpful to a meeting than we possibly could be. So it is all right in that way; but we feel we are missing a good deal of profit and pleasure by being prevented from attending. Still, we will try to be satisfied to remain at home, and look after the weekly Bee Journal, which requires more constant attention than any other bee-paper published in America. Only by attending strictly to business, and letting nothing interfere, are we able to keep it "afloat at the price," as Mr. Hutchinson has well said.

Contributed Articles.

Review of Thos. W. Cowan's Book—The Honey-Bee.

BY PROF. A. J. COOK.

IT seems almost unnecessary to criticise so accurate and admirable a work as "The Honey-Bee," by Thos. W. Cowan. However, a small horse is quickly curried.

On page 1 it is stated that the honey-bee belongs to the sub-kingdom Annulosa. There has never been very good authority for Annulosa as a Phylum. At present all our best authorities place insects in the Branch or Phylum, Arthropoda.

On page 2 I should prefer Ichneumon Flies to Ichneumons, both for euphony and symmetry. On the same page I notice Mr. Cowan still uses the old word, "mellifica" for the honey-bee. I think I prefer this to "mellifera," altho the latter would take precedence if we follow the latest rules of priority. In a popular work, it is always better, I think, to use names that have generally been used in our literature.

It is the usage at present, not to capitalize specific names, even tho they may be derived from proper nouns. Thus, *Bombus virginica* or *Xylocopa californica* should be written as here shown.

On page 4, we have "workers who represent." Of course this was a case of faulty proof-reading.

Is it true, as stated on page 5, that the worker-bees are unloaded of their burden at the entrance to the hive? From the middle of page 7, we learn that the same bee that gathers pollen, not only pushes it into the cell, but packs it with her head, and then goes to other cells to empty her honey-stomach. Does the same bee that gathers the pollen pack it? And do bees generally gather pollen and honey at the same time? They certainly do sometimes, but I think not usually.

On page 10, it is stated that the egg contains a vital germ. The seed contains a germ, but never the egg. The egg is simply a cell and usually receives another cell which is incorporated into its substance before development commences. While it would be perfectly proper to say that a seed contains a germ, I do not think it would be correct to speak in like way of an egg.

On page 12, pupa, chrysalis and nymph are all given as synonyms. It were better to confine chrysalis to the pupa of butterflies, while entomologists now use nymphs for both the larva and pupa of such insects as pass thru incomplete metamorphoses like the locust.

On page 13, 15 days is given as the term of a queen's development from the time the egg is laid till the queen emerges. I believe the usual 16 days is a more correct average. Fifteen and even seventeen days may occasionally mark this time.

On page 18 we read "clypeus or nose." Neither form, position, nor function would warrant the use of nose in this place.

On page 20, we read that the compound eyes of the imago are developed from the simple eyes of the larva. This is certainly not always the case. Is it ever true?

On page 22, pharynx, gullet and mouth mean the same. I supposed, as with us, that pharynx refers to the enlargement just back of the mouth, and that gullet was synonymous with oesophagus.

On page 30 we read, "Bees are also able to distend the infolded membrane on the under side of the tongue, and expose the rod, probably for the purpose of cleaning it." I have demonstrated by using colored sweets that this unfolding is sometimes for the purpose of lapping thick honey. I am inclined to think this is its true function.

The naming of the wing, on page 39, is misleading. The front long vein is called the costal, and the one towards the tip from this, the marginal. The large cell back of the costal is called the median, while all those that touch the marginal are called sub-marginal, sub-costal or cubital.

On page 40 it is stated that the hooklets of the posterior wing are on the outer margin. I should say they are on the inner two-thirds of the front margin, as shown in the beautiful figure on page 39.

At the bottom of page 62, we find, "the others are termed ganglions." All the masses of gray cells are termed

ganglia. I prefer the Latin plural which is certainly the more euphonious.

On page 64, certain nerve fibres are spoken of as reflex. The word reflex better refers to a sensation. It is probable that every nerve is more or less the track of reflex nervous actions.

Mr. Cowan's statistics on page 70, regarding the size of the brain of different insects, are very interesting. It is stated that the pedunculated bodies of the brain form one-fifth part of the volume of the brain, and 1-940 of the whole body, while in the ant, they are nearly half the volume of the brain and 1-286 part of the whole body. Yet in the next paragraph it is stated that the whole brain of the worker-bee is 1-174 of the body, while in the ant it is 1-286 of the body. Of course there is some mistake here. When we read that the brain of the water-beetle is only 1-4200 part of the body, our respect for the bee's position in the insect world is augmented. The first figures would seem to put the ant at the head of the insect world. It has seemed to me that it rightly belongs there, tho we must say that the bee is a close second.

I think the wrong impression is given on page 79, as I think the removal of the sting always proves fatal, tho death may not occur for some days. This opinion was the result of numerous careful experiments.

The fact as given on page 82 that the poison of the queen is very different from the poisonous contents of the sac of the worker, is very interesting.

That Mr. Cowan is up with the latest is shown by his explanation of vision as shown on page 104.

Mr. Cowan says on page 105, last line, that white-eyed drones are blind. Are we sure of this? Albino people, it is true, have defective vision, but can see. I believe the same is true of white-eyed bees.

Digestion is not to separate the nutrient food from the other ingesta, as we read on page 106. Absorption or osmosis performs the separation. Nor is digestion necessarily to make the food liquid, tho this is generally the case. Some liquids, like blood albumen, are yet non-osmotic, and so must be digested. I think the best definition for digestion is the process by which the food is rendered osmotic.

On page 107, we are told that the food is digested by the action of the gastric juices secreted by cells in the chyle stomach. I believe that the pollen is mostly digested by the secretion from the lower head-glands, while the nectar is digested by secretion from the upper head and thoracic glands. The stomach-cells may furnish some digestive ferment tho I doubt if they do more than to keep the stomach moist and absorb the digested food. Near the bottom of the page, the action of the stomach mouth is referred to as voluntary. I believe all the muscles of the alimentary canal are involuntary.

I do not like the use of the word "chyme." Its use is almost discontinued in human physiology, and better be everywhere. I suppose we shall continue to use the word chyle for the digested food of the true stomach, tho I do not like it. It is now used in human physiology to designate the digested fat, and to give it so different a meaning in discussing bees is confusing.

I was glad to note, as stated on page 112, that Mr. Cowan has actually seen the queen void her faeces. I had supposed that she utilized all her aliment, and that there were no excreta. Mr. Cowan saw the workers sucking this up.

On page 117, it is stated that the upper head-glands and thoracic glands—Mr. Cowan uses singular number—are larger in the queen and absent in the drone. It is strange that in the modification of the queen, these glands have not diminished in size or disappeared. If their secretion, as I believe, is to digest the nectar, they would seem hardly more necessary for the queen than the drone. Possibly the food must be more thoroughly digested in winter, and so as the queen lives thru the winter, she requires these glands. It is an interesting fact, as given on page 124, that the drones die in three days if not fed by the workers, and the fact that this food is withheld by the workers accounts for the quiet taking off of the drone at the last.

On page 135, the ovaries are called glands. If this be correct, then the eggs are a secretion. I would call neither the ovaries nor testes, glands.

It is stated on page 136 that eggs are not found in the ovaries. As the queen emerges from the pupa stage, I think this is an error. As with all higher animals, all the eggs are present at birth, but are not fully developed until just previous to deposition.

On page 141, Berlepsch is quoted as never having

known a queen to be impregnated earlier than the third day. Dzierzon once knew a queen to be impregnated at 47 days. Is Mr. Cowan correct on the same page in the following? "Generally the wedding flight takes place between twelve and four o'clock, seldom later and yet more seldom earlier." Mr. Cowan says the time the queen is out varies from one minute to 45 minutes.

On page 147, Mr. Cowan argues in favor of telegony. I do not believe that the drone from a pure mother will ever show taint, however mated. I believe if there is a show of taint, the queen was not pure. My very extensive experiments in this matter seem conclusive.

Mr. Cowan states on page 157, that while both drones and workers are fed different food during the close of the feeding period of their larval state, the queen-larva has the same food throughout. After this partial weaning, digested pollen and honey are given the workers, and undigested pollen the drones. I wonder if this has been demonstrated.

The quotation on page 171, from H. Holz, that "the fat cells are connected with the membrane by tubes thru which the liquid wax flows to the membrane, and passes thru when the temperature is at 95 to 98 degrees Fahr."—have others seen the fat cells or the tubes? It is stated on the same page that wax-secretion is voluntary. I do not believe this at all. As shown in my "Bee-Keepers' Guide," it probably results from much eating and great quiet.

It is probably correct, as stated on page 173, that the presence of both pollen and honey in the food will increase the amount of wax-secretion. We, our cows, all animals, work better when they have normal food.

Mr. Cowan's explanation of the varying form and size of cells—pages 179-187—is intensely interesting, and is the result of most valuable research. His descriptions, as well as his photographs, show that cells may be of almost any form and of very varying size. The old idea of exactness and perfection goes for nought. Dr. Planta is quoted on page 189 as authority for the statement that the coloring of the wax when it is pale yellow is owing to the pollen in the food. This is interesting, if true.

I feel as tho an apology is due for any criticism of so excellent a work. I do it in no spirit of dogmatism, but only to call attention to points which I think will warrant investigation. The book is rightly regarded as authoritative in Europe, and is certainly one of our very best works.

Los Angeles Co., Calif.



Report for 1900 of the Ontario Apairy Inspector.

BY WM. M'EOY.

DURING 1900 I visited bee-yards in the counties of Lincoln, Wentworth, Brant, Huron, Perth, Waterloo, Wellington, Halton, York, Ontario, Simcoe, Lanark and Russell.

I inspected 100 apiaries and found foul brood in 33 of them, and dead brood of other kinds in many others which had been mistaken for foul brood. The first thing I did when I entered a locality was to pick out the best bee-keeper in it, and get him to take me from place to place so that he could see how I managed the business, and, if required, would make a valuable witness. I have done this for the last ten years, and kept up a correspondence with the most of them, and by this means I always knew pretty well how all were getting on at the curing.

At this work I burned a good deal of midnight oil, and sometimes I wrote all night and part of the next morning. Sometimes death and sickness delayed the curing, and in all places where I found this to be the case, I went and did the curing myself.

The following is a list of part of the men that went the rounds with me during the last ten years: Messrs. F. A. Gemmill, J. B. Hall, C. W. Post, Wm. Wells, Charles Mitchell, Martin Emigh, D. W. Heise, Abner Picket, R. L. Patterson, James Armstrong, W. A. Chrysler, J. McPherson, E. Donnelly, Samuel Wood, J. K. Darling, Peter Byer, Jas. Nolan, John Fixter, of the Ottawa Experimental Farm, John Calvert, Alexander Taylor, A. E. Hoshal, Moses Vernon, Wm. Holden, A. Boomer, J. Ward, and Henry Couse.

I have here furnish a list of part of the men that I pickt out "to pad the road with me," and taking them as a whole, for good bee-keepers, they will rank among the best, if not the best, in the world, and I will leave it to them to say if I did not manage the whole business justly, very fairly, and successfully, all along the line.

Since I was first appointed inspector, I have had thousands of diseased colonies cured of foul brood, and very

many apiaries that were once in a bad state with foul brood, have not only been cured, but have given some of the largest average yields of honey of any ever taken in the Province of Ontario. One of the treated apiaries gave an average of 200 pounds of clover and basswood honey per colony, and 50 percent increase in bees, and had plenty of clover and basswood honey left in the hives for wintering the bees. This yield was taken in a locality where no buckwheat was grown.

Every bee-keeper I visited during the past season treated me in the most courteous and generous way, and to them and the kind friends I met everywhere, who took me from place to place, I return my most heartfelt thanks.

I also thank the editors of all the bee-journals for the valuable help they gave me.

Woodburn, Ont., Dec. 3, 1900.



No. 8.—Interesting Notes on European Travel.

BY C. P. DADANT.

THE crowning pleasure of our stay at Nyon was a bee-keepers' banquet, given in our honor by our kind host, Mr. Bertrand, the day previous to our departure. He had invited a number of leading bee-keepers, members of their association, and the invitation was not only for the banquet, but for a full day at his chalet. Two or three days before, he told me, with a smile, that every one of the invitations had been accepted "with the greatest enthusiasm." I believe he meant to credit this enthusiasm to my presence at Nyon, but it was quite evident that if any of these friends had ever had the opportunity of visiting at the home of Mr. Bertrand, there was no need of any other incentive than an invitation from him to create enthusiasm.

They began coming in about nine o'clock, and by eleven quite a nice little party had assembled on the veranda, and the usual bee-talk was going on. You all know how this goes, and European bee-keepers are just like us. They like to talk of their crops, of what they do, and above all, they love to talk of far-off America's bee-keeping. So I had my hands full. But we had no crop to report this year, while our Swiss bee-keepers had a very good honey season, and one or two of them had magnificent returns.

In practical bee-culture, I found one difference of opinion with us, and that is on the usefulness of the Italian bee. Swiss bee-keepers do not seem to consider this bee as superior to the common bee. Our American bee-keepers are almost unanimous in recognizing that the Italian bees are more active, go out earlier, work later in the day, and are more economical than the blacks. Personally, I have often noticed that, in bad seasons, when strong colonies of common bees have not enough to winter, the even moderately strong Italian colonies have a sufficient amount for their needs, tho there are exceptional seasons when none have enough. But it would seem that they put their honey in more compact shape, and crowd their breeding apartment more, and some people even say they do this too much in good seasons. At any rate, we find them decidedly superior. But our Swiss friends, honey-producers or queen-breeders, and all practical men, were in unison in the assertion that they found very little difference in results between the common bee and the Italian. The same thing was said to me later by two or three French apiarists. They all agree on their greater gentleness, their steadiness on the combs when these are lifted out of the hive, and it was the universal verdict that, as far as handling was concerned, they were decidedly more desirable. In this we are all of the same opinion.

Much was said about adulteration, not only of honey, but of beeswax. The adulteration of this last-named substance is so common in Europe, that most Swiss bee-keepers prefer to make their own beeswax into foundation themselves, on what is called the Rietsche press, than run the risk of buying goods that break down in the hive at very ordinary temperatures. Yet the foundation made on the Rietsche press is very inferior in workmanship, and would not be accepted on this side of the ocean. But they produce mainly extracted honey, and the thickness of the central rib in the combs does not cause them any worry. The Rietsche press is made of a pair of copper plates hinged together, and bearing the imprint of the honey-cells, into which the hot beeswax is poured and prest. It is a German invention, and its manufacturer claims a sale of over 16,000 presses since its introduction. The price is low, from \$6 to \$8 each.

I was highly pleased to see that, in spite of all that has

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been said in Europe, concerning America, and its adulterated goods, we are certainly not any worse off, in this respect, than the countries of Europe, with all their laws and strict police. There was no end of complaints about adulterated honey being sold on the markets in competition with the pure article, but what seemed most strange to me, was the assertion that in many instances adulterated honey is sold under its true name, and seems to please the consumer better than the pure article.

At one o'clock we sat down to a meal that would bring a smile of content to the face of the most fastidious epicure. Swiss cooks are as good as French cooks, and like them they deserve to be ranked among the masters of the art. Not only was the palate pleased, the eye was feasted also by the sight of an enormous pike, roasted whole, a profusion of flowers, a bouquet in front of each plate, and in the center of the table an almond cake in the shape of a movable-frame hive. In addition to this specimen of our pursuit, the honey crop was represented by fine samples brought from Bulgaria, two days before, by one of Mr. Bertrand's pupils, Mr. Pantcheff. These samples, both comb and extracted honey, were probably gathered from alfalfa or esparce.

But all good things come to an end, and after many a toast, our bee-friends left us one after another, and wished us a safe and pleasant journey in our long return voyage toward the setting sun. Hearty invitations were extended to us to visit them, by several of the guests, in case we came again at a later day. I hope I may have occasion to accept.

The following afternoon we, in our turn, took leave of our host and boarded the thru train for Paris. Thus ended one of the pleasantest visits of our voyage.

On this train, we had another illustration of the politeness and attention of Swiss railroad men. Our Swiss railroad passes which were about to expire, took us as far as the frontier, and from there we expected to take a ticket for Paris. When the conductor came to us, I enquired about this matter, at the same time handing our passes to him. "Oh," said he "this coach goes on to Paris, and when we get to Vallorbe, I will get your tickets for you, so you will not need to get down." And so he did; but we did have to get down, just the same, a little farther, because of our trunk, which had to be examined at the custom house, in passing the frontier. Whatever may be said in favor of tariffs, custom houses are a curse to the traveler, and just as much so in our own land as between the countries of Europe.



Growing Alsike Clover—First Prize Article.

BY WILLIAM ROBINSON.

I HAVE been familiar with this plant several years, and will give you my experience with it, both as a farmer and a bee-keeper. It is the hardiest of all the clovers, thrives on almost any soil, but gives better results in soils containing some clay than in sandy soil. It makes a luxuriant growth in land too wet to grow red clover at all. The roots do not heave out of the ground in spring, as other clovers often do; therefore it has never been known to winter-kill in our locality, while last year fully 90 percent of the red clover here was killed. Some fields near me were sown two years ago with red and alsike mixt, half of each; but now very few plants of the red clover are to be found in those fields, while the alsike still flourishes as tho it were a native of the soil.

For sowing with timothy it can not be equaled by any other variety. This combination makes as heavy a hay crop as any; but the advantage of the alsike is, it is as easily cured as the timothy, and retains its beautiful bright green color in the hay, which is sometimes difficult to get in the red varieties. It remains green and succulent a long time after seed has fully matured, so it does not require harvesting "just at the right time," as is the case with other varieties.

As to its feeding value, I think it superior to any other kind, and my neighbors all agree with me on this point. The stalks, not being coarse and woody, are eaten absolutely clean by all kinds of stock—no waste.

Some farmers claim it does not make as good an after-growth as the red during dry seasons; but I can see no great difference in this respect. The dairy farmers in some parts of this State prefer to mix the seed in equal portions, claiming the best results in this way.

The seed may be sown on spring grain. This gives best results in our part of the state with all varieties of clover. Good catches are also usually had by sowing on

winter rye or wheat in early spring before the frost is all out. We also sometimes sow on old timothy meadows with good results in early spring.

Mixt with timothy, four pounds per acre of the alsike is sufficient; alsike alone, 6 to 8 pounds per acre, or about half the amount usually sown of other kinds. I have four acres, sown two years ago, 6 pounds to the acre, and the clover now stands a little thicker on the ground than I like it.

Those who will sow red clover should always mix some alsike with it. The alsike, being more hardy, occupies the spaces where the red fails to grow. When we sow with timothy we sow 2 quarts of alsike and 6 quarts of timothy per acre.

This season, up to June 27, we had the worst drought ever known in this part of the State. Under these unfavorable conditions the alsike made the best and largest hay crop of all our grains. This, it seems to me, would indicate that it would do well in warmer climates than ours.

Alsike clover is the best honey-plant we have in Northern Wisconsin. I have never known it to fail to yield nectar abundantly since it was first grown here, about ten years ago. During our severe drought here last June, it was the only plant our bees work on, white clover being an entire failure with us. My 42 colonies stored 30 pounds each from the first crop. Since July 1, we have had abundant rains and warm weather, and the bees have been working on the after crop the past ten days, and are still storing honey from the alsike. My plan has been to encourage my neighbors to sow alsike by making a present to each member of the family a nice section of alsike honey, telling them that it was a small portion of the honey my bees gathered from their clover. All bee-keepers should so encourage their neighbors by giving them a taste of honey or by donating at least seed to give it a trial.—*Gleanings in Bee-Culture.*

Barron Co., Wis.



Wintering Bees Where Snow Drifts Deep, Etc.

BY G. M. DOOLITTLE.

QUESTION.—We have 25 colonies of bees in chaff hives which stand where the snow drifts deep. Would it do to put them in a room during winter, or could we fix a shelter over them where they are, moving them together under this shelter, or could we set up a shelter in front of each hive and let the snow drift over hive, shelter and all?

ANSWER.—If the room spoken of in the first question is an underground room or cellar, then I should say move the bees into this cellar at the beginning of winter, providing a temperature of from 41 to 48 degrees can be maintained; for I have the best of success in wintering bees in my bee-cellars, and in this the temperature stands at from 43 to 46 degrees. A part of my bees are in chaff hives and a part in single-walled hives, and I find that the bees in the chaff hives winter fully as well in the cellar as do the others. The only disadvantage chaff hives have for cellar-wintering lies in their extra weight and the room they take up in the cellar (according to my opinion), but these disadvantages are more than overcome by the advantage they possess during cool and cold weather coming in the fall before they are put into the cellar, and in the spring after they are put on their stands.

A spring wheelbarrow overcomes the difficulty of carrying chaff hives, while the packing of one hive on top of the other to the ceiling of the cellar overcomes the lack of room, in a measure. If the room spoken of is to be a room above ground, with no special provision made for controlling the temperature, then I should say, try almost any other way of wintering them, than in a room with an un-governable temperature; for where the temperature in any room goes below the freezing-point, and remains thus for days or weeks, and during a warm spell rises to 50 degrees



Alsike Clover.

or more, bees are almost sure to perish before spring arrives. Moving the bees together under a shelter might answer, providing they can have a chance to fly during warm days in winter; still there is much work to this process, and, worse still, many bees are liable to be lost or become badly mixt up when the hives are placed back where they are wanted during the summer, after having been thus wintered.

The plan of having a shelter over the entrance of each hive, and letting shelter and hive drift over, I have tried several times, but with me it is not a success. Several of our best apiarists claim that this plan is a success with them, and advise the wintering of bees in this way, but I have yet to see the colony of bees in this locality over which the snow has been drifted from two to three months, that has not become uneasy, gone to breeding, contracted the bee-diarrhea, and exhausted its vitality to an extent sufficient to cause a bad case of spring dwindling, or loss of the colony altogether. After a process of time the bees seem to become too warm, break the cluster, commence brood-rearing to replace the bees dying of exhausted vitality, run to the entrance and fan there as in summer, the commotion thawing the snow all about the hive, until a cat or small dog could run all around the lower part of the hive, this causing them to consume their stores of pollen and honey very rapidly, which consumption brings on diarrhea and death, unless the bees have a chance to fly at about the time brood-rearing commences, and even then the colony is so weakened that it is of little use the following season.

Where the snow stays about the hive only for a few days or a week at a time, it will do no particular harm. But otherwise I would advise carrying the bees to some higher ground, where the snow does not drift, or else fix an underground cellar to winter in.

HALF-DEPTH FRAMES FOR EXTRACTING.

QUESTION.—I work five colonies the past season for extracted honey, using the full-depth Langstroth frame in the upper stories. These frames were filled half full of light-colored honey and half with dark, the light being in the upper part of each frame and the dark in the lower part. What I wish to know is, if I were to use half-depth frames could I secure the light honey in the upper set and the dark in the lower ones? If so, it would save mixing the honey when extracting, as was the case the past season, for I could not extract the light honey without having the dark all mixt with it.

ANSWER.—I very much doubt your ever having an experience again similar to the one outlined above, as seasons vary so much. Indeed, I hardly see how you could have had such a result this year, for in all of my experience I never saw a whole set of frames that were evenly half filled with light and dark honey. It is no rare occurrence to have one or two frames so filled that, practically speaking, they would be half filled with white honey and half with dark; but to have the whole upper story thus filled is something that does not happen more than once in a lifetime.

Half-depth frames are recommended by some of our most practical bee-keepers for upper stories for extracting; but I never heard any claim as coming from them that the light and dark honey could be kept separate by using such frames. Some years we have a large yield of white honey with little if any dark honey; other years just the reverse of this is the case; hence it will be seen that the supposition hinted at by the questioner could not possibly come to pass in such years; for when white honey was abundant the bees would use nearly all the room furnisht, in storing white honey, finishing out the very bottom parts of the combs with dark. When there was a light yield of white honey with a good yield of dark, just the reverse would be the case; namely, there would be a small quantity of white honey in the upper part of the upper half-depth frames, while the rest of the said frames would be filled with dark honey, and all of the lower ones.

The only way that I know of to avoid mixt honey is to either extract all of the white honey as soon as the white honey harvest is over, putting back the combs for the bees to use during the dark honey-flow; or take away the frames of white honey at the end of the white honey-flow, and substitute other frames in their places. Where one has the time that can be spared for extracting in the summer, the former is the preferable plan, as it requires a less investment in frames of comb; but where time is of great value during the summer months, and of little value at other times, it may pay to adopt the latter plan. In either case the white honey should be left on the hive as long as possi-

ble, taking it off just as the dark honey is beginning to appear, so that it may be as thoroly ripened as possible without being mixt with the dark.

Onondaga Co., N. Y.



Better Outlook for Southern California Bee-Keeping.

BY GEO. W. BRODBECK.

DURING the 14 years of residence in this State, I have endeavored to be reasonably conservative in all of my statements regarding the bee-beeping interests of Southern California; consequently, I have no fear of being considered an extremist in anything I may say.

The past three seasons (with an emphasis on the first two), have been the most disastrous successive seasons this section has ever known, and the present estimate is that fully 75 percent of the bees that were living in these southern counties four years ago, have perisht; the remaining 25 percent that survive are in the hands of our most enterprising bee-keepers. This is an instance fully demonstrating the "survival of the fittest."

While I sympathize fully with those who have met with such a serious financial loss, I am constrained to believe it will result in the building up of the bee-keeping industry of this section on a better and firmer basis.

California bee-keeping in the past has been conducted in a slipshod manner; and while we have many who are the peer of any bee-keeper in the United States, nevertheless it has been a lamentable fact that a great percentage cared but little how or in what manner they secured their product, with the consequent result of selling honey for any price they could get.

The few who survive the ordeal of the last three years, look forward to a brighter and better future of this industry in this great State, and at this writing, as we listen to the patter of the rain which has been falling almost continuously for five days, and in such quantity and at such an opportune season, that it incites a hope that the coming year may prove one of the phenomenal ones often referred to in the history of California bee-keeping.

Los-Angeles, Co., Calif., Nov. 21.

P. S., Nov. 22.—We have had a fraction over six inches of rain up to the present, and every one I meet is happy.

B.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Working an Out-Apiary for Comb Honey.

1. I understand you run your out-yard for comb honey. How do you manage it at swarming-time? Is some one there all the time thru the day watching swarms, to manipulate the colonies, exchanging supers, etc.? If not, how often do you go there in harvest time?

2. Why do you work your out-apiary for comb honey? Does it give better results in dollars and cents? Would you recommend working an out-yard for comb honey? Will it not do as well to run for extracted honey, counting the labor?

INDIANA.

ANSWERS.—1. It is not easy to say what the management is, for it is by no means always the same. Formerly a watcher was on hand all the time whose sole business was to watch for swarms and cage the clipp queens when a swarm issued. The caged queen was put in at the entrance of the hive far enough so the bees would be sure to take care of her. About 5 days after the issuing of the swarm, I cut out all queen-cells, and also 5 days later, when the queen was releast. No colony so treated ever swarmed again. Lately I have had no watcher, and we try to visit the out-apiary every 5 to 7 days. Something is done toward prevention of swarming by destroying all eggs found in

queen-cells. Beyond that all sorts of plans have been tried and are being tried, without fully solving the problem. One way is to give the bees the same treatment already mentioned when they swarmed. That is, when grubs are found in cells, to cage the queen and treat the colony just as if they had swarmed.

2. I work out-apiaries for comb honey for much the same reason that one man works at blacksmithing and another at tailoring; I've got into the way of producing comb honey, and it's easier to run on in the same rut. If one can do as well with extracted honey in the home apiary, then by all means it is the best for the out-apriary, for the swarming matter could be managed more easily with bees run for extracted than for comb honey.

Hive for Extracted Honey.

What style of hive should I adopt for extracted honey? I have always used the Gallup hive, and have been thinking of changing and getting some standard make of hive.

WISCONSIN.

ANSWER.—If you have all the frames you need, it is doubtful if a change to any other form or size would bring gain enough to pay for the change. There are advantages, however, in having fixtures as nearly standard as possible, one great reason being that it is easier to get such goods at low rates; so if your hives are not in sufficient number, or if you have at present only a small number, so that the cost of change will not be great, you may do well to change to the dovetailed hive with its frame $17\frac{1}{2} \times 9\frac{1}{2}$.

Amount for Winter Stores.

I have a colony of medium strength, which I am wintering on five frames, in the cellar, the frames being the Langstroth size. I fed rather late in the season, so that when I put them into the cellar, not more than half the honey-cells were capt in those frames. The rest all, or mostly all, had honey in them, but it was not capt over. Will this be enough to winter them on? If not, would one section filled with hard candy, placed on the frames, be enough?

I see you smile at my asking you to answer me, when I have given such a vague description, but please "make a guess."

MINNESOTA.

ANSWER.—Five combs ought to be enough, capt or un-capt. It will not be a bad plan, however, to give some hard candy, as being better for them than so much of the un-sealed syrup, which may be rather thin.

Was Sugar in the Urine Caused by Honey?

I applied for a life insurance policy, but was rejected because there was sugar in my urine. The examining doctor told me that I ate too much honey. This would tend to show that honey has some bad effect. Was that doctor correct as to the cause of that sugar, or would you place the blame elsewhere than on the honey?

IOWA.

ANSWER.—If analysis showed the presence of sugar in the urine, and if nothing in that line had been consumed but honey, then it would be reasonable to conclude that the honey was at fault. If however, sugar and honey had been consumed, the case would be quite different. Sometimes a physician does not have clearly in mind the distinction between cane-sugar and honey, and if both have been consumed, he may charge to the account of the honey what should justly be charged to the sugar.

Wintering Bees—Rearing Queens.

1. I have 10 colonies, nine of which I bought. All are in 8-frame Langstroth hives, and are from last year. They filled from one to two supers, but the supers are taken off. Will they have enough in the eight frames, or must I feed them next spring?

2. I also would like to know what you think of my plan of wintering. I have them on the summer stands, which are in a shed built purposely for them. I have an empty super filled with fine hay on top of them, a canvas over the hive first to keep the hay from getting into the hive. I have them six inches apart, five in a row; two rows, one on top

of the other. I have them stuf between, and about two feet thick at the back and on top, with hay. The front is unprotected, with the entrance about one-fourth open. Is that air enough? The hay I put in there to take up the moisture from the bees.

3. The one I caught last summer I put into a 9-frame hive with old combs. Can I rear queens from them if they winter? They are four or five banded Italians.

ILLINOIS.

ANSWERS.—1. A colony in an 8-frame hive, that has work in supers is likely to have enough honey for winter, but not always. Sometimes there will be so much brood in the eight frames when the supers are on that the honey will be all crowded in the supers, then if they gather nothing after the supers are off they may be short.

2. Your plan of packing your bees ought to work well, but if the entrances are as small as some entrances, it would be better to leave the whole entrance open; that is, supposing the entrance to be only $\frac{1}{8}$ inch or so deep.

3. There is no apparent reason why you should not be able to rear queens from them.

A Beginner's Questions.

1. Can I get better filled sections by having a bee-space over them?
2. Do bees start to work sooner with a mat or cover over the sections?
3. When producing extracted honey, does the queen-excluder interfere with swarming when placed over a 10-frame brood-chamber? I want to prevent swarming as much as possible.
4. Where do bumble-bees winter?
5. How does Mr. Coggshall manage swarming with all his out-apiaries?
6. How long can a queen be confined in an Alley queen and drone trap without injuring her?
7. How many pounds of honey will a Langstroth frame hold when spaced the proper distance?
8. Can you give me the address of some reliable queen-breeders in Italy?
9. How long does a drone-bee live?
10. What is the length of a bumble-bee's tongue?

QUERIST.

ANSWERS.—1. Doubtful. The advantage of a bee-space over sections is in other directions.

2. Generally not. They might do so at a time when the coolness of the weather would make a difference in temperature with and without covering.

3. If the excluder makes any difference, it ought to increase the likelihood of swarming, by confining the queen to a smaller space, and perhaps by the slight inconvenience to the bees caused by the presence of the excluder.

4. I don't know. Probably in their nests.

5. I don't know.

6. Under favorable circumstances she probably might do good work after several weeks' confinement. Generally her chances for much usefulness would lessen rapidly after a week's confinement.

7. Perhaps six.

8. I can not.

9. Probably in most cases until the workers decide it is too expensive a business to support a lot of idlers. This is likely to happen whenever pasture becomes scarce. A queenless colony, however, will continue the lives of the drones. When the workers decide it is best to dispense with the continued presence of drones, they may be seen busily engaged in harrying the drones, the death of the latter being principally caused by the withholding of food by the workers.

10. Not sure I've ever seen it given.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at \$1.00.

The Premiums offered this week are well worth working for. Look at them.

* The Afterthought. *

The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

"GETTING BEES TO MAKE WAX."

Quite a good few of us do not take any stock in the old tradition about wax being (to the bees) an expensive article, which causes them a mysterious loss when they secrete it. A rotten tradition hardly worth the very small amount of powder required to blow it to pieces. To change honey to wax costs the bees a little valuable time; but beyond that it apparently costs them neither less nor more than what the relative water, carbon, oxygen and hydrogen of honey and wax naturally call for. (O king, the full pail *does* run over when you put a live turbot in it!) One by one sham mysteries have to "clear the coop." Well, this being thus, the Australian experiences in intentionally harvesting as much wax as possible during their great runs of honey is practical, dollar-and-cent apiculture, which we may well look into. I rather guess that Loyalstone's method of cutting off the lower half of each comb every time it is extracted is the winning way. The other way of cutting the whole of each alternate comb would make them build *some* when by the other method they would not build any; but it divides the comb-builders up into small sections, to no particular good, I reckon. As for the third method of slicing off half the face of the comb in uncapping instead of the thinnest possible sheet, I should think that to be the poorest of the ways mentioned. And indeed it straightly appears that in Australia bees are not always prompt to lengthen out again such shaved combs. I would remark that my bees very often seem reluctant to lengthen the cells of super combs. When I was experimenting in this line I cut from the brood-chamber, and took all the comb every three days, to keep the eggs from hatching—rather too severe a method for very extended use; but it utilizes one of the strongest of bee qualities—obstinacy. The Australian record of 11 pounds wax from one colony in a season—well, we would have to "scratch gravel" to come up to it. But 11x25x100—\$275, from an apiary—worth scratching for. It is of interest to hear that the best honey-gatherers produce the most wax. Page 723.

COTTON HONEY A CHOICE ARTICLE.

That is quite high praise for cotton honey—combs of snow and contents of glycerine. If the flavor even tolerably corresponds, the South has at least one choice kind of honey. Let me see, this is Texas. A yield from cotton not by any means universally expected, I believe. Page 718.

A MOSES (NOT A CALEB OR JOSHUA) ON SPELLING REFORM.

And this last number I am reviewing closes with another shot for improved spelling. On that subject I am like Moses—delighted to view the good land, but not going in myself—absorbed in a more important reform that I am unwilling to lay an extra ounce of weight on—and too old. Would have to use both spellings for awhile, and I fear I should be all mixt up in the process till my page would be but a delirious species of "pi." When sentiment gets strong enough to sustain the move, two simple laws can help the reform amazingly without exactly taking away any one's liberty to spell, if he chooses, as crooked as the horns of Noah Webster's ram. Let one little law say that all public advertising shall be given to newspapers using the improved spelling; and let another little law say that books printed in the improved spelling may travel at a somewhat cheaper rate by mail.

CAUSES OF DISEASES OF BEES.

Pollen-shells heavily charged with fungi in *all* winter dysentery excreta in Texas. I suppose some of our wise-heads would incline to the darky's explanation aenent the chicken, "whoever put the pollen in there was no friend of ours." Dr. Howard is nobly considerate in admitting that it may be different in the North, where bees are quiet and shut in for months. That he has not been able to find a definite microbe in paralysis to which the disease can be charged, is of some interest to us. And much more so is his experience in trying to infect healthy colonies—can not as yet make them take paralysis when conditions are sanitary, and nectar coming in lively. Dr. Howard evidently

does not think the queen communicates any disease to the eggs she lays. Good thing if we could be fully assured of that—and practical certainty may come by and by. But, on the whole, I'm glad there is no professor in my region to be starting every plague for experimental purposes. I should be thinking how the bubonic plague got loose in Vienna. Mr. Stahlman's article (page 743), helps my feelings on in this same direction.

BARRELS FOR LARGE USERS OF HONEY.

How strong the honey-dealers are in favor of barrels, as a general thing! Don't believe they "catch on" to the main objection. The main objection is the *impossibility* of making oak barrels so the staves will not shrink in contact with honey. The dealers persist in thinking that all the trouble is owing to careless cooperage. But we really seem to have some light in the direction of getting the barrels made of just the right kind of wood. Barrels are certainly *desirable* in supplying great bakeries that take honey by the ton. Pages 725-7.

WATER FOR BEES.

So Mr. Greiner wants both his bee-town and his man-town to be "dry" towns. He is right. Nonsense, and worse than nonsense, to give bees water in the winter. But his hint is also sensible that during cold spring weather, when a good many bees are perishing in the work of bringing water, perhaps something useful might be done in that line. I believe the trouble has hitherto been that the "contrary little critters" will go for water all the same, and neglect that which you give them. Water-carriers don't know what else to go at, perhaps. Had you been betimes with your watering, possibly they would never have become water-carriers.

BEES WINTERED IN A CLAMP.

Mr. Hutchinson's heavy loss of bees in a clamp is so illustrative that it should not be forgotten. Too many colonies for the space and air they were in. Air got a little bad, but they could have borne it, if they had all kept passive. Instead of that, they all got supremely active in the very natural effort to improve their air by fanning. This speedily used the oxygen up until the air got unendurably bad. Then every bee crawled in the direction from which oxygen was coming by percolation. Some may have suffocated, but probably most died of starvation, not knowing enough to get back to the food. Page 739.

EXPERIMENTING WITH THE GOLDEN SYSTEM.

The proposition of J. S. Hartzell, page 744, to prove the superiority of the Golden system by trying *one* hive is hardly what one would expect of a practical bee-man. Neither the success nor the failure of one hive can count for very much, unknown elements of the problem will creep in so. Even with dozens of test-hives in each of two methods it requires much thought and care on the part of the experimenter really to hold the scales level—and otherwise our favorite "hoss" is pretty apt to win the race.

GRANULATED SUGAR AND GLUCOSE.

The apparent error on page 760 is not an error in reality, I judge. I mean where Mr. Cowan says much of the granulated sugar of commerce is adulterated with glucose. Here the trouble seems to be that (being a scientist and also a foreigner) he doesn't sling our "United States" exactly as we do. Where he says glucose he does not mean the *fluid* article we mostly have in mind. And we apply the term "granulated" only to very dry white sugar, while he apparently means *brown* sugar in a granulated but moist state.

NO POLLEN IN NORMAL FINISHT HONEY.

Well, there is also my blunt declaration on page 746, that there is no pollen in normal finisht honey, and Mr. Cowan's, on page 759, exactly to the contrary. Not a case of what shall be done when doctors disagree, but what shall be done when one of the doctors in the temple of science disagrees with one of the door-keepers thereof. Mr. Cowan is an expert microscopist of large experience, while I am a very green and shockingly inexperienced one. Good chance for me to say I must have been mistaken; and yet somehow I decline to say it. I just point out the contradiction and the situation, and let things stand that way for a bit. Pretty cheeky, am I not? I have a sneaking idea that scientific men, as well as others, sometimes bandy sayings back and forth till they come to believe them, when no one ever actually proved them at all.

BEE-BOOKS

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages, beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, in cloth, 75 cents; in paper, 50 cents.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No aparian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, \$1.25.

Bee-Keepers' Guide, or Manual of the Apizry, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, \$1.25.

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A B C of Bee-Culture, by A. I. Root.—A cyclopedia of 400 pages, describing everything pertaining to the care of the honey-bees. Contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, \$1.20.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, \$1.00.

Bienen-Kultur, by Thos. G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Bienezucht und Honiggewinnung, nach den neuesten methoden (German) by J. F. Eggers.—This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia.—A practical and condense treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apairy Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, \$1.00; for 100 colonies, \$1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Chehire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

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GENERAL ITEMS

Bees Did Fairly Well.

My bees did fairly well this season. I had four colonies last year, and by chance increase to 28 this spring, a friend of mine offering me his whole apiary at a bargain. With my little experience, the "A B C of Bee-Culture," the American Bee Journal, and my good wife, I managed it very well. I devote all my time outside of the shop to my bees and a good-sized garden. We had only five swarms, and secured 1200 pounds of sweet clover comb honey, but had a lot of partly-filled sections left.

On account of no rain the clover crop was cut short, and the buckwheat crop was a complete failure.

I sold five colonies, and put 28 into winter quarters with plenty of stores.

Rock Co., Wis., Dec. 6. CHAS. LUEBKE.

An Old Bee-Keeper.

I have taken the Bee Journal ever since it was first published, and should feel lost without it. I have owned bees and kept them ever since I was 14 years old, and I earned the money that I bought them with by dropping corn.

I will be 78 years old if I live until the 12th of next May. If there are any readers of the American Bee Journal that have been continuously in the bee-business longer than I have, I should like to have them say so thru the Journal.

I was sorry that I was not able to attend the National convention, but I have very much enjoyed reading the proceedings.

Delaware Co., O., Dec. 4. H. BESSE, M.D.

Unsatisfactory Season—Kind Words

The past season was rather unsatisfactory, tho it started in with the promise of a fair yield of honey. But first too dry, then too wet weather cut the yield short about one-half, tho I managed to secure a little over 800 pounds of section honey from 25 colonies, spring count, and an increase of 11 colonies. One peculiar thing about the swarms that I never experienced before, was that they produced very little surplus, only two supers from the 11 swarms. They were large swarms too, and came out early, before June 20th. One old colony that did not cast a swarm produced 82 well-filled sections.

As my health is too poor to do much else I seem to become more and more attached to bee-keeping and the American Bee Journal, and intend to keep right on with both as long as possible.

I have been very much interested in the report of the National convention held in Chi-

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Langstroth on... The Honey-Bee

Revised by Dadant—1899 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for \$1.25, or club it with the American Bee Journal for one year—both for \$1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with \$3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.
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Rocky Mountain Bee-Plant Seed!

(*Cleome integrifolia*.)

...FREE AS A PREMIUM...

The A B C of Bee-Culture says of it: "This is a beautiful plant for the flower-garden, to say nothing of the honey it produces. It grows from two to three feet in height and bears large,



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Orders shipt immediately upon receipt. A complete line of everything needed in the apiary. Five different styles of Bee-Hives.

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Perfect in construction and action. Hatches every fertile egg. Write for catalog us to-day.

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AMERICAN BEE JOURNAL, 118 Mich. St., Chicago, Ill.

**Please mention the Bee Journal when writing
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cago, from the beginning, and am not at all anxious to have it abbreviated in the least. The same with C. P. Dadant's account of his travels in Europe.

Rev. E. T. Abbott's talk on food adulteration ought to be published in pamphlet form, and scattered over the whole country.

Mitchell Co., Iowa, Dec. 10. A. F. FOOTE.

The Past Season's Results.

This is the first year I ever kept more than four or five colonies. They increase to 12 and averaged 35 pounds to the colony.

GEORGE MITCHELL.

Cook Co., Ill., Dec. 18.

Bees Dying Off.

My bees are dying very fast. Since cold weather set in about half of them have died, and now I think they will not winter. I lost 3 colonies just the same way last winter. The trouble seemed to come from a colony to which I introduced a premium queen. I was away in the fall, and one day my wife saw a lot of dead bees in front of the hive, and she soon discovered that the bees from another colony were robbing this one, so she had it carried away 2½ miles. The bees all died in a short time. As cold weather came on the bees from the other colonies commenced to die and by Feb. 19th they were all dead.

A swarm was given to me in June of this year, and about two weeks after I got them I found that they were queenless. I sent for a queen and introduced her July 4th. But they did not build up as fast as I thought they ought to. The first of October they seemed to be quite full of bees, but now I should think there are about 2½ quarts. Of course they are clustered for winter and that may make some difference.

None of the bees seem to be old, as the wings are not worn any; they are not swollen nor shiny, and they have plenty of honey. I do not know of any one that does any spraying, and no one else is losing their bees as I am.

Last winter I put the bees into the cellar, but as it was damp I thought perhaps that made some difference, so this year I have them on the summer stands in an outside case, and some burlap on top of the frames.

AUSTIN STOVER.

Hancock Co., Maine, Dec. 6.

Measuring Bees' Tongues.

A short time ago two cages of bees were sent to me from J. H. Gerbracht, McHenry Co., Ill., for measurement. Cage No. 1 was a sample from a colony that stored 240 pounds of surplus honey, and were a strain of his own breeding. Cage No. 2 was from a five-banded strain that stored 135 pounds of surplus honey during the past season. The measurements of the bees from each cage are as follows:

Cage No. 1—Length of tongues were as follows: 6, 5.9, 6, 5.8, 6, 6, 5.9, 6, 5.8, 5.7. Average length, 5.9 millimeters.

Cage No. 2—Length of tongues were as follows:

Farm Raised Poultry

Pay the buyer because they are strong, vigorous, healthy and will breed better stock. A copy of our large stock we ship is a FARM RAISED Poultry Guide explaining all, and tells how to make honey with poultry. Worth \$25. Sent for only \$15. JOHN BAUSCHER JR., Box 94 Freeport, Ill.

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The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a long-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

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lows: 4.5, 5, 4.8, 4.7, 4.8, 5, 6, 5.5, 4.5, 4.3. Average length, 4.9 millimeters.

It will be seen that the measurements are very irregular, probably owing to the fact that the bees were of all ages, as Mr. Gerbracht says he ran them into the cage just as they came. These colonies were on a double stand, with the entrances only a few inches apart. This will easily account for the one long-tongued bee in the cage with the five-banded ones, as they doubtless work from one hive to another to a certain extent. One experiment, of course, does not absolutely prove anything, but after many cases of this kind I am sure that the difference of length of tongue goes with the corresponding difference in honey-production, other things being equal.

The more work I do along this line the more certain I am that there is nothing in bee-culture to-day that furnishes the opportunity for improvement that is offered along this line of improving the strains of our bees. I am confident that there are tons of honey going to waste every year simply because the bees have not the ability to gather it. As I have said before, it probably will not be practical for every bee-keeper to run an experiment station of his own, but he can well afford to pay more attention to this phase of improvement, and select his breeding-stock from his best workers, even if they are not the highest colored bees in his yard.

J. M. RANKIN,
Apiarian Dept. Mich. Agricultural College.

Two Almost Entire Failures.

We have had two seasons in succession of almost entire failures of the honey crop, and at least 50 percent, if not more, of the bees have perished from starvation, and the effects of foul brood, which has gained a firm foothold here.

There are no bees kept here except as a side-issue, altho some keep from half a dozen to 50

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If, instead of sending for a sample, you send us 25c we will send you "Health" booklet, a 25c box and a handsome gold stick-pin, set with emerald, ruby or pearl, warranted to be worth double the money. Order by number. This is an extra introductory offer. Only one pin to one person. If unsatisfactory, money returned. Send now while the offer is good.

2

3

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• B.W. 10

colonies or more, but they are kept in a slip-shod manner, as the bee-keepers have the impression that they know all about keeping bees, and have no use for any bee-papers. I think it is safe to say that 90 percent of them never heard of foul brood, and many will not believe that it amounts to anything, altho they have lost nearly all their bees from the effects of it.

I am trying to save some of mine and have been very successful by putting them in clean hives filled with foundation, but it is time and money almost thrown away, so long as my neighbors will not take any precautions to prevent spreading it. If I can succeed in saving some of them until the overwise bee-keepers are bee-keepers no more, and their bees are a thing of the past, perhaps I can then rid them of disease, and do something with them, but this is a very poor locality for bees, at best.

The present outlook for bee-keeping in this vicinity is very discouraging, but I enjoy reading the Bee Journal, and will take it one year more at least, bees or no bees.

—Tioga Co., Pa., Dec. 5. A. D. WATSON.

Results of the Season of 1900.

Bees did next to nothing this year. I secured about 800 pounds from 24 colonies. They never started out better than they did last spring, but the weather was first cold and then dry to extremes.

I received the premium Dr. Miller queen all right, was much pleased with her, and had no trouble in introducing.

I have 40 colonies in the cellar, but several of them are light. We hope for better results next year.

C. A. FAIRBANKS.

Jones Co., Iowa, Dec. 12.

Poor Season for Bees.

We have been doing some bee-keeping in this neck of the woods the past season, but honey-getting has been almost a total failure.

The early spring was very promising. Bees built up splendidly, and when white clover should have bloomed they were ready to gather in the harvest. But, alas! a drought such as the writer has never seen so early, set in, and never did vegetation stand as still as it did then. The result was, of course, not a bit

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and Retail

This foundation is made by an absolutely non-dipping process, thereby producing a perfectly clear and pliable foundation that retains the odor and color of beeswax, and is free from dirt.

Working wax into foundation for cash, a specialty. Write for samples and prices.

A full line of Supplies at the very lowest prices, and in any quantity. Best quality and prompt shipment. Send for large, illustrated catalog.

GUS. DITTMER, Augusta, Wis.
Beeswax Wanted.
Please mention Bee Journal when writing.

BEE-SUPPLIES.

Muth's Square Glass Honey-Jars.
Send for Catalog.

HONEY AND BEESWAX WANTED.
C. H. W. WEBER,
42Atf 2146 Central Ave., Cincinnati, Ohio.

BEE-SUPPLIES!

Root's Goods at Root's Prices
POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free. WALTER S. POUDER,
512 Mass. Ave., INDIANAPOLIS, IND.

Please mention Bee Journal when writing.

STUDENTS RETURNING HOME

For holiday vacations can, upon presentation of proper credentials, obtain tickets via Nickel Plate Road, to all points in Central Passenger Association territory, at a fare and a third for the round trip. Tickets will be sold on day of closing school and on day immediately preceding closing date; good returning until date school convenes, but not later than January 8, 1901.

For information as to train service to Ft. Wayne, Cleveland, Fostoria, Erie and other points, call on or address John Y. Calahan, General Agent, 111 Adams St. Chicago Passenger Station, Van Buren St. and Pacific Ave., on the Elevated Loop. (43)

The Ohio Farmer AND THE American Bee Journal,

Both One Year for only \$1.40.

THE OHIO FARMER is clearly one of the leaders of the agricultural papers of this country. It is a 20-page weekly, often 24 pages, handsomely printed on good paper, and **CLEAN** in both reading and advertising columns. It has the largest actual staff of editors and correspondents (all farmers) of any farm paper published, and is practically progressive in defending the farmer's interests.

IT WILL HELP YOU MAKE "THE FARM PAY." Send to **OHIO FARMER**, Cleveland, Ohio, for a free sample copy.

REMEMBER, we send both the Ohio Farmer and the American Bee Journal, both one year for only \$1.40. Address,

GEORGE W. YORK & CO., 118 MICHIGAN STREET, CHICAGO, ILL.

of surplus white clover or basswood honey in most localities in this county. There were a very few localities where the bees gathered a little surplus white honey. I have been obliged to disappoint my customers as never before.

There was some fall honey gathered, and merchants are very glad to get it at 12 and 13 cents per pound. White honey from Michigan is bringing 20 cents.

The bees did not store any surplus worth mentioning, they are generally in good condition for winter with abundance of stores.

GEORGE SPITLER.

Crawford Co., Pa., Dec. 7.

A Foolish Claim.

The retail price of honey in this market is 20 cents per pound. It is claimed that full sheets of foundation were given to the bees, and that they were fed glucose, as the very white honey in the market has no sweet taste!

I leave for my winter home in Florida, Dec. 12th.

MRS. L. HARRISON.

Peoria Co., Ill., Dec. 10.

Results of the Season, Etc.

I commenced the season with about 77 colonies, which increased to 125. I secured about 500 pounds of comb honey and 2000 pounds of extracted, and get 15 cents per pound for the comb, and retail the extracted at 11 and 12½ cents—9 pounds for \$1, or 12½ cents a pound for a less quantity.

In preparing the bees for winter I fed, I should think, about 600 or 700 pounds of early comb honey saved for the purpose, in extracting-combs. I have not fed any sugar syrup for a long time as people are so afraid they will get some of it in the honey.

I, for one, would be a pleased man to see the Brosius bill past. It would add very much to the use and sale of extracted honey, and would, in some ways perhaps, help the sale of comb honey.

We are having some thawing and freezing



SELF-REGULATING

We have a perfect system of regulating temperature and moisture.

MARILLA and BROODERS

are guaranteed. Your money back if you want it. Send 2c stamp for catalog.

MARILLA INCUBATOR CO., Box 31, Rose Hill, N.Y.

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California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper.

The Pacific Rural Press. The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, \$2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,
330 Market Street, - SAN FRANCISCO, CAL.

LOW RATES TO THE SOUTH.

Excursion tickets at reduced rates are now being sold by the Chicago, Milwaukee & St. Paul Railway to the prominent resorts in the South, including Jacksonville, Fla., Mobile, Ala., New Orleans, La., Savannah, Ga., El Paso, Tex., which are good for return passage at any time prior to June 1, 1901. Information regarding rates, routes, time, etc., can be obtained on application to any coupon ticket agent of the Chicago, Milwaukee and St. Paul Railway.

weather, which I fear will be a little hard on the clover.

I put my bees in the cellar about the middle of November, and they seem to be very quiet.

It is hard to see how you can furnish so good a paper for so little money. May the American Bee Journal live long to stand for the rights of bee-keepers and be a foe to adulteration and swindlers.

Hardin Co., Iowa, Dec. 11. W. C. NUTT.

CONVENTION NOTICES.

New York.—The annual meeting of the New York State Association of Bee-Keepers' Societies will be held in the Kirkwood, at Geneva, N. Y., Wednesday, Jan. 9, 1901, at 10 a.m., and continue thru the afternoon and evening. An interesting program has been arranged, and a good time is expected. C. B. HOWARD, Sec.

Romulus, N. Y.

Michigan.—The next annual meeting of the Michigan State Bee-Keepers' Association will be held in the Grange Hall, Traverse City, Dec. 26 and 27, 1900, commencing at 2 p.m. This will without doubt be the largest attended meeting in the State for many years. We are to be honored with the presence of Mr. A. I. Root, whose name has become almost a household word, not only throughout the United States, but the world, wherever bees are kept. The program will be in the form of an open parliament, and those topics will be discussed that are nearest to bee-keepers' interests. A beautiful and novel badge has been adopted by the officers of the association, and will be sold at cost, 25 cents, and the annual dues will be 25 cents more. This will constitute expenses, except railroad and hotel bills. Reduced rates on all railroads, and the following hotels have made reduced rates to bee-keepers: Park Place Hotel, \$1.50; Hotel Whiting, \$1.00 to \$1.50; Hotel Plankborn, \$1.00; Hotel Shilson, \$1.00; and Columbia Hotel, \$1.00 to \$1.25. Certainly all should be suited with the above rates to choose from.

Fremont, Mich. GEO. E. HILTON, Pres.

TOUR OF ALL MEXICO

in Pullman's finest Compartment Drawing Room, Library, Observation and Dining Cars—all Vestibuled—with the celebrated

OPEN-TOP CAR "CHILILITL!"

for Observation in the Mountains and Canons, and Dining Car in the Tropics.

A delightful trip of 38 days with **Three Circle Tours in the Tropics** of the South of Mexico and a Visit to the Ruined Cities.

All exclusive features of these itineraries of leisurely travel and long stops—The Special Train starts Tuesday, Jan. 22, from Chicago.

TOUR OF PUERTO RICO.

SPECIAL PULLMAN CARS leave Chicago **Thursday, Jan. 17, and Thursday, Feb. 14**, at 9:30 a.m., connecting with the splendid new steamships Ponce and San Juan, sailing from New York the second day following. Individual tickets sold for other sailing dates, alternate Saturdays.

TICKETS INCLUDE ALL EXPENSES EVERYWHERE

These select limited parties will be under the special escort and management of **THE AMERICAN TOURIST ASSOCIATION**, Reau Campbell, General Manager, 1423 Marquette Building, Chicago.

Itineraries, Maps and Tickets can be had on application to Agents of the Chicago, Milwaukee & St. Paul R'y.

The Emerson Binder.

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only \$1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL

DR. PEIRO.

34 Central Music Hall, CHICAGO.

Please mention Bee Journal when writing.

MERIT ALWAYS WINS.

The hard times of the past three or four years have been very destructive to all industrial affairs, and the railroads have had unusual amount of difficulty in making both ends meet. Roads that have, during this trying period, earned dividends while at the same time affording high-class transportation facilities to their patrons, have, indeed, been fortunate. And such an event speaks well for the management of the roads.

The record of the Nickel Plate Road during the recent period of industrial depression, has indeed been remarkable, and it speaks most eloquently of the conservative judgment of the managers. For this road has made great and steady progress in the material improvement of its roadway and appliances, and in perfecting its equipment. The interests of the public have been in no wise neglected; in fact, the success of this road has inured to the benefit of the public, as much, if not more, than to the stockholders. The condition of the road to-day shows this. Great and valuable improvements of a permanent character have been made—in the shape of strengthening the roadway, bridges and other accessories, and procuring new and improved safety appliances; new coaches have been added, elegant Pullman sleeping-cars put on, new and powerful engines have been placed in service, and everything has been done to raise the standard of the road, to perfect its service, and to give it a leading place among the best roads in the country. The result has been obvious. The people have observed the progressive spirit of this road, have given it a liberal patronage, have enjoyed its excellent facilities, and that tells the whole story of a highly successful enterprise.

Among the most noteworthy improvements effected by the Nickel Plate Road is the introduction of a first-class dining-car service, which has won the approval of the best class of patrons. Then the coaches have been illuminated by the brilliant Pintsch gas, heated by steam, and placed in care of a colored porter, so the passengers have had the best that money can afford, at the lowest rates. The thru train service of the Nickel Plate, running in connection with the West Shore and Fitchburg Railroads over the great Hoosac Tunnel Route, between New York, Boston and Chicago—ranks with the best in the country, and has become deservedly popular. Elegant new coaches, and palatial Pullman buffet sleeping-cars run thru without change; the service is unexcelled, the time fast, scenery most fascinating.

Located along the south shore of Lake Erie are many substantial and attractive summer resorts that are yearly growing in popularity, and this class of travel promises a continual increasing source of revenue to the Nickel Plate Road.

48A4

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Dec. 7.—The demand has fallen off very much of late, but prices have not declined to any great degree from those prevailing for the past 60 days, but any pressure to sell would cause a decline. Fancy white comb, 16c; No. 1, 15c; amber and travel-stained white, 13@14c; dark and buckwheat, 10@11c. Extracted, white, 7@8c; amber, 7@7½c; buckwheat and other dark grades, 6@6½c. Beeswax, 2c.

R. A. BURNETT & Co.

KANSAS CITY, Dec. 6.—Fancy white comb, 16@16½c; choice, 15c; light amber, 13@14c; dark, 10c. Extracted, 7@8c. Beeswax, 2@2½c. Receipts very light; demand good.

W. R. CROMWELL PRODUCE Co.,
Successors to C. C. Clemons & Co.

BUFFALO, Dec. 7.—Honey is so high that it curtails the demand very materially. Sales are moderate, and some lots will have to be cut to sell. Fancy comb, 17@18c; choice, 16c; other grades, 10@15c. No extracted, and none wanted. Beeswax quiet at 2@3@.

BATTERSON & Co.

ALBANY, N. Y., Dec. 6.—Fancy white, 17@18c; No. 1, 16@17c; No. 2, 14@15c; mixt, 13@14c; buckwheat, 12@13c. Extracted, white, 8@8½c; mixt, 7@7½c.

The honey market is steady with light receipts and good, stiff prices. Extracted, market quiet, but little movement. Will be more demand later on.

H. R. WRIGHT.

BOSTON, Dec. 7.—Our market on honey continues strong, with light receipts. Fancy one-pound cartons, 17c; A No. 1, 15@16c; No. 1, 15c; No. 2, 12@13c. Extracted from 7@8@8½c cents, according to quality. Beeswax steady at 2@2½c.

BLAKE, SCOTT & LEE.

CINCINNATI, Sept. 21.—The demand for fancy comb honey is good and finds ready sale at 16@16½c; No. 1, 15c. The demand for extracted honey at present is slow and offer same by the barrel as follows: White clover, 8@9c; Southern, 6@7c; Florida, 7@8 cents, according to quality. Beeswax, 2c.

The above are MY SELLING PRICES. I do not handle any honey on commission, but pay spot cash on delivery.

C. H. W. WEBER.

NEW YORK, Nov. 20.—Good demand continues for all grades of comb honey. We quote: Fancy white, 15@16c; No. 1 white, 14c; No. 2 white, 12@13c; amber, 12c; buckwheat, 10@11c. Extracted in fairly good demand at 7@8@8½c for white, and 7c for amber; off grades and Southern in barrels at from 65@75c per gallon, according to quality. Not much demand for extracted buckwheat as yet. Some little selling at 5@6@. Beeswax firm at 28 cents.

HILDRETH & SEGELKEN.

DETROIT, Dec. 10.—Fancy white comb, 15@16c; No. 1, 13@14c; dark and amber, 10@12c. Extracted, white, 8@8½c; amber and dark, 6@7c. Beeswax, 2@2½c.

M. H. HUNT & SON.

SAN FRANCISCO, Dec. 5.—White comb, 13@14 cents; amber, 11@12½c; dark, 8@9c. Extracted, white, 7@8c; light amber, 6½@7½c; beeswax, 2@2½c.

There is no opportunity for much activity in this article, spot stocks being of such slim proportions as to admit of little other than a light jobbing trade. Market has a firm tone, with prospect of values being maintained at current range throughout the season.

A HONEY MARKET.—Don't think that your crop is too large or too small to interest us. We have bought and sold five carloads already this season, and want more. We pay spot cash. Address, giving quality, quantity and price.

THOS. C. STANLEY & SON, Fairfield, Ill.

Please mention Bee Journal when writing.

**DO YOU WANT A
High Grade of Italian Queens
OR A CHOICE STRAWBERRY?**

Send for descriptive price-list.

D. J. BLOCHER, Pearl City, Ill.

47A26t Mention the American Bee Journal.

BEES QUEENS
Smokers, Sections,
Comb Foundation
And all Apian Supplies
cheap. Send for
FREE Catalogue. E. T. FLANAGAN, Belleville, Ill.

Please mention Bee Journal when writing.

We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR
Hives, Extractors
OR ANYTHING YOU WANT IN THE
BEE-KEEPING LINE.
WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

W. M. GERRISH, East Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.



Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.

Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,

Sprout Brook, Montgomery Co., N. Y.

Please mention Bee Journal when writing.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	60c	\$1.00	\$2.25	\$4.00
Sweet Clover (yellow)	\$1.50	2.80	6.25	12.00
Crimson Clover	70c	1.20	2.75	5.00
Aislike Clover	90c	1.70	3.75	7.00
White Clover	90c	1.70	3.75	6.50
Alfalfa Clover	80c	1.40	3.25	6.00

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
118 Michigan Street, CHICAGO, ILL.

IF YOU WANT THE

— BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send \$1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Special Discounts to the Trade.

FALL SPECIALTIES

Shipping-Cases, Root's No-Drip; Five-Gallon Cans for extracted honey, Danz. Cartons for comb honey. Cash or trade for beeswax. Send for catalog. M. H. HUNT & SON, Bell Branch, Mich.

Please mention Bee Journal when writing.

REDUCED RATES FOR CHRISTMAS AND NEW YEAR HOLIDAYS.

The Nickel Plate Road will sell tickets Dec. 22 to 25, inclusive, Dec. 31, 1900, and Jan. 1, 1901, at rate of a fare and a third for the round trip, to any point located in Central Passenger Association territory, good returning to and including Jan. 2, 1901. Vestibuled sleeping-cars. Individual club meals, ranging in price from 35 cents to \$1.00, served in dining-cars. Address, John Y. Calahan, General Agent, 111 Adams St., Chicago, for particulars. Depot, Van Buren St. and Pacific Ave., on the Elevated Loop. (42)

23rd Year **Dadant's Foundation.** 23rd Year

We guarantee satisfaction. ***

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
PATENT WEED-PROCESS SHEETING.

Why does it sell so well? ***

Because it has always given better satisfaction than any other. Because in 23 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised

The Classic in Bee-Culture—Price, \$1.25, by Mail.

Beeswax Wanted ***

AT ALL TIMES.

Please mention Bee Journal when writing.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ill.

MADE TO ORDER.



Bingham Brass Smokers,

made of sheet-brass which does not rust or burn but should last a life-time. You need one, but they cost 25 cents more than tin of the same size. The little pen cut shows our brass hinge put on the three larger sizes.

No wonder Bingham's 4-inch Smoke Engine goes without puffing and does not



DROP INKY DROPS.

The perforated steel fire-grate has 381 holes to air the fuel and support the fire.

Prices: Heavy Tin Smoke Engine, four-inch Stove, per mail, \$1.50; 3½-inch, \$1.10; three-inch, \$1.00; 2½-inch, 90 cents; two-inch, 65 cents.

BINGHAM SMOKERS

are the original, and have all the improvements, and have been the STANDARD OF EXCELLENCE for 22 years. Address, T. F. BINGHAM, FARWELL, MICH.

Please mention Bee Journal when writing.

Sections==A Bargain.

We have 50,000 3½x5x1½ inch plain sections, and as our call for them is light, we will sacrifice them. Prices very low. Write.

Apriaries—Glen Cove, L. I. I. J. STRINGHAM, 105 Park Place, New York, N. Y.

Please mention Bee Journal when writing.

Four Celluloid Queen-Buttons Free

AS A PREMIUM

For sending us ONE NEW SUBSCRIBER to the American Bee Journal for three months with 30 cents, we will mail you FOUR of these pretty buttons for wearing on the coat-lapel. (You can wear one and give the others to the children.) The queen has a golden tinge. This offer is made only to our present regular subscribers.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one of the buttons as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate, it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

Prices of Buttons alone, postpaid: One button, 8 cts.; 2 buttons, 6 cts. each; 5 or more, 5 cts. each. (Stamps taken.) Address,

GEORGE W. YORK & CO., 118 Michigan St., CHICAGO.

